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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,886	10/03/2000	Toshiya Imai	198009US2S	6145

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EXAMINER

EASTHOM, KARL D

ART UNIT PAPER NUMBER

2832

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/677,886

Applicant(s)

IMAI ET AL.

Examiner

Karl D Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-21 is/are pending in the application.
- 4a) Of the above claim(s) 9, 10 and 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-8, 11 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Matsuoka et al.

Matsuoka discloses the claimed invention at col. 4 and the sole figure with electrodes 0mm from end to end from the varistor sides to a thickness of the high resistance layer, with the high resistance layer having a silica containing epoxy resin, see col. 4, lines 24-34. In claim 3, the thickness is more than 10u at col. 4, lines 45-65. In claim 4, the test is met since a ball of a small size can be dropped from 40 mm on the sides or when attached to the sides, where "the falling ball test" does not specify more. Or, since the claimed materials are the same as disclosed, the same properties are inherent. In claims 5 and 7, zinc, for example, is transferred or deposited at col. 5, lines 1-10.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5, 7, 8, 11, and 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka or Katsumata et al. (JP3-208304) in view of Meidensha (assignee JP 49-30896). The claimed invention is disclosed except the high resistance material. Meidensha discloses at the abstract the claimed material which has either phosphorous or alumina for forming a good glass

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for a varistor of zinc oxide so that it would have been obvious to use the known glass to obtain a good coating for a similar type varistor. For claims 8 and 11, phosphorous is a main component where the term is not defined and it is broad. In claim 7, the electrode necessarily was deposited by one of the methods of transferring or depositing since it is present. In claim 4, the test is met since a ball of a small size can be dropped from 40 mm on the sides or when attached to the sides, where "the falling ball test" does not specify more. Or, since the claimed materials are the same as disclosed, the same properties are inherent. For claims 3 and 5, Matsuoka discloses the thickness for the side layer as 10um, col. 4, lines 60-65, and electrode material at col. 5, lines 1-25. For the side to side distance, this is met where the electrode is between zero and the high resistance layer thickness, see the main figure of Matsuoka

5. Claims 4-8, 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meidensha (assignee JP 49-30896 ) in view of Matsuoka. The claimed invention is disclosed as noted above except the side to side distance for claims 8 and 21, the electrode material for claim 5, the side thickness for claim 3, and see claims 4 and 7 below. . In claim 7, the electrode necessarily was deposited by one of the methods of transferring or depositing since it is present. In claim 4, the test is met since a ball of a small size can be dropped from 40 mm on the sides or when attached to the sides, where "the falling ball test" does not specify more. For claims 3-4, Matsuoka discloses the thickness for the side layer as 10um in order to protect against moisture, col. 2, lines 15-20 at col. 4, lines 60-65, and for claim 5, material at col. 5, lines 1-25, as well known for attachment to leads by solder. It would have been obvious to employ the well known material in order to render the electrode solderable, and to employ the thickness in order to protect against moisture.

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6. Claims 4, 6-8, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meidensha (assignee JP 49-30896 ) in view of either Sieke, or in view of Matsuoka with Seike et al. The invention is disclosed as noted above except for the side to side distance as to claims 8, 11, and 21, and thickness for claim 6. Seike discloses at col. 3, lines 39-47 and Table 1 electrodes 2,3 at the claimed thickness to enhance surge tolerance, and it would have been obvious to form such electrodes for that reason. Sieke discloses, as does Matsuoka, electrodes going to the edge or over, known so that the whole resistor is used in order to control the resistance traversing from one electrode to the other, so that such an arrangement would have been obvious. Or see the side to side distance and other remarks above with Matsuoka as for claims 4 and 6-8 assuming arguendo the side to side distance is not met by Sieke.

7. Claims 3-8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka in view of Nakata et al. The claimed invention is disclosed essentially as noted except the material of the glass. Nakata discloses a glass formed from at least the substance of Bi-B-Si at the abstract as a good glass to make excellent varistor characteristics such as discharge current, life performance etc., so that such a glass would have been obvious. For claims 3-7 and the side to side distance of claims 8 and 21, see the remarks above with regard to Matsuoka.

8. Applicant's arguments filed 1/8/4 have been fully considered but they are moot or not persuasive. Applicant argues for claim 11 that phosphate is not a main ingredient in the Meidensha document. This is not correct where the glass is termed a zinc alumina silico phosphate glass, similar to applicant's disclosure, so that the features of the glass are determined

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by phosphate so it is a main component, where the term is broad. Applicant has absolutely no quantity disclosed for the term.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (272) 571-1989.

The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (272) 571-1989. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE